

Module: BMHP5003 Introduction to
Physiology

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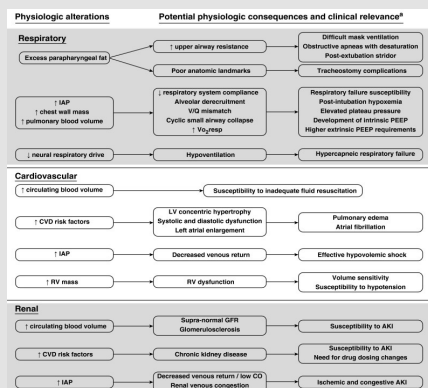
OBESITY

INTRODUCTION

- ❖ The topic the poster is the health issue of obesity for young people in the United Kingdom exclusively.
- ❖ An obese person is someone classified as extremely overweight and a high amount of body fat.
- ❖ 1 in 4 adults will be affected by this health issue.
- ❖ 1 in 5 young children will be affected by this issue as well.
- ❖ The weight of individuals and the index check used for identifying a base individuals is BMI.
- ❖ A BMI of 25 to 29.9 identifies an individual as overweight.
- ❖ A BMI of 30 to 39.9 identifies an individual as obese.
- ❖ A BMI of 40 and also above that will mean that the individual is severely obese (NHS, 2021).

KEY INFORMATION FOR THE PHYSIOLOGY OF OBESE INDIVIDUALS

- ❖ There are physiological alternations which occur for the bodies of patience who are obese or severely obese especially.
- ❖ Those are respiratory, cardiovascular and renal - shown below (Shashaty and Stapleton, 2014).



FACTORS AFFECTING INCREASE IN YOUNG PEOPLE WITH OBESITY

- ❖ Young people are particularly vulnerable to parental perception and attitudes at home.
- ❖ Genetics can also be a factor contributing to obesity in young people.
- ❖ Diet and the quality and quantity of food provided is a significant factor as well.
- ❖ Lack of physical activity and discouragement can contribute towards obesity (Chan and Woo, 2010).

CASE STUDY QUESTIONNAIRE

- ❖ The questionnaire that I have personally prepared includes one patient.
- ❖ The patient is referred to as A.
- ❖ Their date of birth is provided in the questionnaire which is also an indicator of how old they are.
- ❖ Throughout the questionnaire it is established that the patient has a form of disability which is not disclosed for confidentiality purposes.
- ❖ Questions are variable between consumption of alcohol, smoking, and food.
- ❖ There are a few options provided for the units consumed for the different aspects such as units of alcohol.
- ❖ There are also some disclosed sections which monitor whether or not the patient has had a history in the family of heart conditions which are usually caused by improper food intake or smoking.
- ❖ The questionnaire will be provided in an appendix.



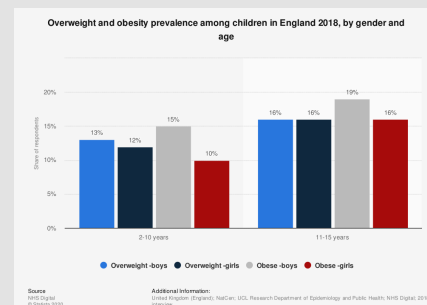
Source: NCBI (2018)

CASE STUDY FINDINGS

- ❖ The results of the questionnaire show the following:
- ❖ - Patient A smokes between 20 to 39 cigarettes a day which is a bad health indicator.
- ❖ Patient A has high blood pressure but has not had a heart attack in the past. Their family has suffered a stroke in the past but not a heart attack.
- ❖ Patient A does not exercise due to a disability
- ❖ Patient A consumes between 1 and 2 units of alcohol per day.
- ❖ All of those results are bad health indicators and may lead to obesity.



Source: Public Health England (2021)



Source: Statista (2020)

LIFESTYLE AND BEHAVIOUR MANAGEMENT OPTIONS FOR PATIENTS WITH OBESITY

- ❖ The primary recommendation for the management of obesity is diet including fruits, vegetables, lean meat, low-fat products (mainly dairy products), and general sources of protein.
- ❖ It is highly recommended that foods with reported high calorie intake and low amount of nutrients must be avoided.
- ❖ Behaviour wise, patients can set realistic goals for the maintenance or production of weight loss.
- ❖ Realistically, patients must be advised to expect a weight loss of 0.5 to 1 kg per week (Butryn, Webb and Wadden, 2011).
- ❖ Regular exercises or constant programs of combination of diet and active walking can help patients to gradually lose weight over time (NHS, 2021).

CONCLUSION

- ❖ In conclusion, prevalence of obesity is observed in countries like United Kingdom and United States.
- ❖ BMI is an index used for the realistic measure of people, especially the ones who are overweight or obese.
- ❖ Personal research produced observations for Patient A which shows that they smoke and drink excessively and does not exercise enough which may lead to obesity in the future.
- ❖ Recommendations include regular exercise and proper diet with realistic goalsetting.

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SPEAKER NOTES:

The topic of my poster today is obesity as a health issue that Young people increasingly face in the United Kingdom. A person who is obese is someone classified as extremely overweight with high amount of body fat in their bodies. Statistics show that in the United Kingdom 1 in 4 adults will be affected by the prospect of obesity. Similarly, 1 in 5 children may also be affected which means that there is a significant number of people who faced the challenge of obesity. The weight of individuals is checked with a BMI which is body mass index. A BMI of 25 to 29.9 will mean that an individual is overweight. A BMI of 30 to 39.9 will mean that an individual is obese. If the BMI of a person is 40 and above, this will mean that the individual is severely obese. All this information is listed on the NHS website (2021).

There is a change of physiology in the bodies of obese individuals. The three primary affected areas will be respiratory, cardiovascular, and renal physiology. In terms of respiratory problems, the individuals can have excess fat, chest wall mass increase and pulmonary blood pressure increase. The cardiovascular problems will include an increase in circulating blood volume, risk factor of CVD, increase in RV mass and IAP. The renal problems will include the same symptoms as the cardiovascular affected areas. There can be severe difficulties if obesity remains untreated and the person does not change their lifestyle which may include respiratory failure, atrial fibrillation, effective hypovolaemic shock, susceptibility to AKI, and others.

There are various factors which can affect development of obesity in young people and it is key to outline the fact that young people are particularly vulnerable to parental perceptions and attitudes expressed at home. Another aspect is genetics which can be a factor for the contribution of obesity in young people. Diet and quantity as well as quality of food provided in-house and outdoors can be a significant factors and it goes hand-in-hand with lack of physical activity or discouragement.

The patient involved in the case study that I created was 1 in total named Patient A for confidentiality reasons. They were asked questions about whether or not they smoke, if they exercise regularly, if they eat healthy or unhealthy food, and whether or not they consume alcohol. The evidence is provided in the blue questionnaire presented in the poster.

The results of the questionnaire show the following:

- Patient A smokes between 20 to 39 cigarettes a day which is a bad health indicator.
 - Patient A has high blood pressure but has not had a heart attack in the past. Their family has suffered a stroke in the past but not a heart attack.
 - Patient A does not exercise due to a disability
 - Patient A consumes between 1 and 2 units of alcohol per day.
- All of those results are bad health indicators and may lead to obesity.

There are recommendations for the lifestyle and behaviour management options for patients with obesity or the ones that are at risk of developing obesity. The primary recommendation is diet including fruits, vegetables, lean meat, low-fat products such as low-fat dairy products, and general other sources of protein. It is highly recommended that the food is only taken when it does not have a high calorie intake and foods with low nutrient level must also be avoided. In terms of behaviour, patients can set realistic goals for the maintenance or production of weight loss where they should expect a weight loss of 0.5 to 1 kg per week. Generally, regular exercise or constant combination of proper diet and active walking can help patients to gradually lose weight over time.

In conclusion, the prevalence of obesity is observed in countries such as the United States and as well as that the United Kingdom. BMI is an index that is used for the realistic measure of body mass to see whether or not people are in their normal weight, overweight, or obese. Personal research produced observations for Patient A which shows that they smoke and drink excessively and does not exercise enough which may lead to obesity in the future. Recommendations generally include regular exercise, proper diet and realistic goalsetting.

This concludes my poster presentation.